

REMARKS

This is intended as a full and complete response to the Office Action dated December 29, 2008, having a shortened statutory period for response set to expire on March 30, 2009. Claims 1 - 4, 8 - 10, 22 and 28 have been amended, and new claim 82 has been added to more clearly recite certain aspects of the invention. Support for the new claim may be found throughout the specification, including page 6, lines 10-12 and page 11, lines 6-9. No new matter has been introduced by the amendments and the new claim presented herein. The amendments and the new claim have been presented in a good faith effort to advance prosecution on the merits. Please reconsider the claims pending in the application for reasons discussed below.

Claims 9, 22 and 28 stand rejected under 35 U.S.C. § 112, second paragraph. Regarding claim 9, the Examiner takes the position that "the desired position" lacks antecedent basis. Accordingly, claim 9, which previously depended from claim 8, has now been amended to depend from claim 13. A similar amendment has also been made to claim 10.

Regarding claim 22, the Examiner takes the position that the phrase "the upper and lower wings" lacks antecedent basis. Accordingly, the phrase "the upper and lower wings" has been replaced with "the one or more wings."

Regarding claim 28, the Examiner states that the limitation "typical of" renders the claim indefinite. As such, the limitation "acoustical transducer and receiver operate in a range typical for sonar devices," has been replaced with "acoustical transducer and receiver are sonar devices" to overcome this rejection. Applicants would like to thank the Examiner for pointing these errors out. Withdrawal of the rejection is respectfully requested.

Claims 1-2, 5-6, 8-9, 12-16, 18-22 and 25-26 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 4,719,987 ("George"). Claim 1 has been amended to now include "wherein the deflector device controls a position of the source array by changing an angle of attack of the deflector device with respect to a direction of a tow while maintaining the source array in a substantially inline direction."

Support for this amendment may be found throughout the specification, including page 8, lines 10-15.

Applicants respectfully submit that George does not teach this newly added limitation. Rather, George discloses a bi-planar pontoon paravane with an adjustable bridle. A tow line is attached to the bridle, and the bridle may be adjusted in order to pull a seismic source array to the side of a towing vessel. (George, col. 2, lines 6-18). In George, "A rack 63 is engaged by pinion gear 62. When rack 63 moves to the left, line 66 of the bridle is pulled to the right and line 64 is also pulled to the right causing the tow point 65 to move closer to the front of paravane 20." (George, col. 3, line 67 – col. 4, line 2). This "results in an adjustment of the angle of attack of the paravane. The angle of attack determines the position of the paravane relative to the towing vessel." (George, col. 2, lines 19-20). In other words, because the source array is suspended beneath the paravane in George, the angle of the source array in George is changed as well. However, in claim 1, the angle of the deflector device is changed, but not the angle of the source array. For this reason, claim 1 is patentable over George. Claims 2, 5-6, 8-9, 12-16, 18-22 and 25-26 are also patentable over George since they depend from claim 1. Withdrawal of the rejection is respectfully requested.

Additionally, claim 2 has been amended to now recite "the source array trails the independently steerable deflector device in an inline direction." Support for this amendment may be found throughout the specification, including page 3, lines 4-6, page 8, lines 3-5, and Figures 1, 3, 5, and 8. George discloses a seismic source array suspended from the paravane by cables. (George, col. 2, line 68 – col. 3, line 2). As shown in Figures 1 and 5 of George, the seismic source array is **suspended beneath** the paravane, and does not trail "the independently steerable deflector device in the inline direction," as recited in claim 2. For this reason, claim 2 is patentable over George in addition to being dependent from claim 1.

Additionally, claim 5 has been amended to now include "a positioning unit mounted on the source array and wherein the positioning unit provides a controller with the location of the source array." Support for the amendment is found throughout the specification, including page 9, lines 10-12. George, however, merely discloses a mast socket that receives an aluminum mast. The aluminum mast has a target covered with

a reflective tape to be used with a laser range-finder to locate the paravane. (Column 3, lines 3-12). Neither the mast socket nor the mast "provides a controller with a location of the source array," as recited by claim 5. For this reason, claim 5 is patentable over George in addition to being dependent from claim 1.

Additionally, claim 8 has been amended to now include "a computerized controller for controlling the position of the deflector device." Support for this amendment may be found throughout the specification, including page 10, lines 9-14. The Examiner asserts that the adjustable bridle that controls the paravane is a controller for controlling the position of the deflector device. (Office Action, page 4). In George, hydraulic fluid is supplied to a hydraulic motor that adjusts an angle of attack of the paravane. (George, col. 3, line 50 – col. 4, line 6). However, the hydraulic motor is not a "computerized controller for controlling the position of the deflector device," as recited in claim 8. For this reason, claim 8 is patentable over George in addition to being dependent from claim 1.

Additionally, George does not disclose wherein the desired position is "the same position as in a previous seismic survey," as recited in claim 9. Rather, George merely discloses excitation of the seismic source arrays. George mentions nothing about this limitation. For this reason, claim 9 is patentable over George in addition to being dependent from claim 1.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over George in view of U.S. Patent No. 5,319,609 ("Regnault"). As mentioned above, claim 1 is patentable over George. Neither George nor Regnault, alone or in combination, teaches or discloses "wherein the deflector device controls a cross-line position of the source array," as recited in claim 1. Since claim 7 depends from claim 1, and since neither George nor Regnault, alone or in combination, teaches, discloses or suggests all the limitations of claim 1, claim 7 is also patentable over George and Regnault. Withdrawal of the rejection is respectfully requested.

Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over George. As mentioned above, claim 1 is patentable over George. George does not teach or disclose "wherein the deflector device controls a cross-line position of the source array," as recited in claim 1. Since claims 23 and 24 depend from claim 1, and

since George does not teach, disclose or suggest all the limitations of claim 1, claims 23 and 24 are also patentable over George. Withdrawal of the rejection is respectfully requested.

Claims 27-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over George in view of U.S. Patent No. 4,890,568 ("Dolengowski"). Since claims 27-30 depend from claim 1 and since neither George nor Dolengowski, alone or in combination, teaches, discloses or suggests all the limitations of claim 1, claims 27-30 are therefore also patentable over George and Dolengowski. Withdrawal of the rejection is respectfully requested.

Additionally, claim 28 has been amended to now include "the acoustical transducer and receiver are sonar devices." Support for this amendment may be found throughout the specification, including page 10, lines 15-18. The Examiner takes the position that Dolengowski teaches that the acoustical transducer and receiver operate in a range typical for sonar devices in column 2, line 60 to column 3, line 42. However, nowhere does Dolengowski mention "the acoustical transducer and receiver are sonar devices," as recited in claim 28. In fact, Dolengowski only mentions a communication system that includes a remote transmitter and a two-way radio receiver. The communication system of Dolengowski does not include sonar devices. Neither George nor Dolengowski, alone or in combination, teaches or discloses "the acoustical transducer and receiver are sonar devices," as recited in claim 28. For this reason, claim 28 is patentable over George in addition to being dependent from claim 1.

New claim 82 has been added to more clearly recite various aspects of the invention. Support for the new claims may be found throughout the specification, including page 6, lines 10-12 and page 11, lines 6-9. With regard to this new claim, Applicants submit that the new claim recites subject matter that is neither disclosed, taught, nor otherwise suggested by the cited references, and as such, allowance of this claim is respectfully requested.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this office action. Accordingly, allowance of the claims is respectfully requested.

Respectfully submitted,

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